

Specification Amendments

Please replace the paragraph beginning on page 1, line 16, with the paragraph, as follows:

One method of making a dental model is referred to as the “Double Pour Method” or “pindex method.” In this method, once the model is poured and allowed time to dry, it is separated and trimmed; then holes are placed in the lower surface of the cast followed by inserting the pin with glue and placing the cast into second-pour stone base. The disadvantages of this process include: time consuming, troublesome dowel pin setup, and the requirement for two pours of casting material to create a base and a die. Moreover, this method often involves guesswork, since this method requires the technician to hand occlude two separate casts manually to set the bite. This guesswork will occasionally result in an inaccurate reproduction of the occlusal relationship of the mandibular and maxillary casts. This inaccurate reproduction will not match the original bites provided by the dentist at the time the negative impression was taken. An example of this method can be found in U.S. Pat. 4,734,033. This method can use a separate hinge that is separately attached to the stone bases or models. The hinge can include an adjustable ball-and-socket type connection that is rigidly fixed after the stone bases or models are aligned.

Please replace the paragraph beginning on page 1, line 29, with the paragraph, as follows:

Another method is referred to as the “Single Pour Method” or “wet pinning method.” In this method, a plastic tray support member replaces the stone base mentioned above, so the second pour stage is eliminated. As a result, the whole process of making a dental model can be considerably shortened. Moreover, it is possible to mount the case without separating the upper and lower cast from the impression so that the case is mounted with the bite exactly as the impression is provided by the dentist. This “Single Pour Method” or “wet pinning technique” can include two types. The first type is the “open cavity tray type” that 1) can stabilize the prosthesis element being worked on, without shifting, or prevent movement of the prosthesis dies with the help of a notched or arcuate cavity wall which is relatively high; and 2) can eliminate the additional labor of registration pin hole drilling and the pindexing process. The disadvantages of this process include: 1) it can be difficult to control the dies over the entire process of die

preparation, wax up, metal finish and porcelain build-up because there is no pin attached at the bottom of the prosthesis dies to hold to work with; 2) initial removal of the entire die from the tray can be difficult because the tray has comparatively high and notched walls necessitating the use of an extra accessory, like a special releasing device, a stand, a mallet etc., and part of the cast can break while being released from the tray; and 3) the initial stage of the wet porcelain build up can be broken because the dies can be seated firmly by a rail or spine that snap fits or clicks into the tray. Examples of such methods can be found in U.S. Patents 5,306,145 and 6,099,305.

Please replace the paragraph beginning on page 3, line 10, with the paragraph, as follows:

The invention provides a dental articulator system to duplicate at least a portion of a patient's mouth for use in producing a dental prosthesis. The device includes a pair of trays pivotally coupled together and pivoting with respect to one another between closed and open configurations. In the closed configuration, the trays are opposingly spaced-apart from one another. In the open configuration, the trays are pivoted away from one another. A plurality of registration pin holes are formed in at least one of the trays. A thin membrane is disposed across a registration pin hole to close off the registration pin hole and resist dental casting material from substantially filling the registration pin hole. Resisting casting material in the pin holes makes the removal of dies easy and clean, and eliminates the initial die breakage off the tray. The absence of the tiny debris of casting material from the initial breakage, and from subsequently repeated engagement and disengagement of the prosthesis dies to the tray, keeps the die receiving surface of the tray clean at all times, and allows positive, accurate, and solid re-registration of the segmented dies onto the tray support member, thus resulting in proper spatial relationship of the segmented dies with respect to the remainder of the dental cast. The thin membrane is breakable by a registration pin inserted into the registration pin hole with the registration pin being extendable through the thin membrane.

Please replace the paragraph beginning on page 12, line 31, with the paragraph, as follows:

While the above has described devices and methods suited for quadrant impression modeling, similar devices and methods can be configured for full-arch impression modeling, as shown in FIGs 30a-c. All the characteristics found in quadrant upper tray 11 and lower tray 12 are reflected in a full-arch tray 90. The full-arch tray 90 can include upper and lower tray support members that are U-shaped to accept impression molds of the patient's entire mouth. The U-shaped tray 90 can be open through a middle of the U-shape, and can have an inner circumferential wall that is flat or straight from a bottom to a top, as shown in FIG. 30a and 30b, to facilitate removal of casting material, such as with a spatula while still wet.